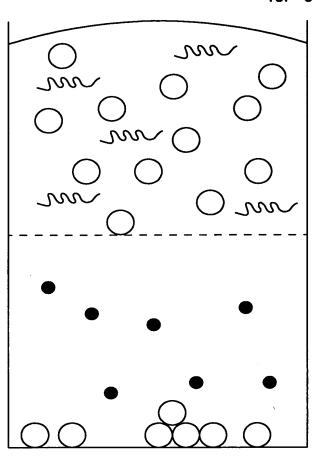
INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1





TOP COMPARTMENT



LOWER COMPARTMENT

FIG. 1

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

2/23



EFFECTS OF PEPTIDE 3 WITH MCP-1 (50ng/ml)

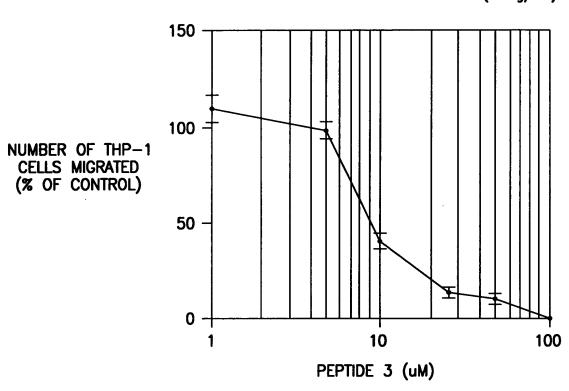


FIG. 2

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



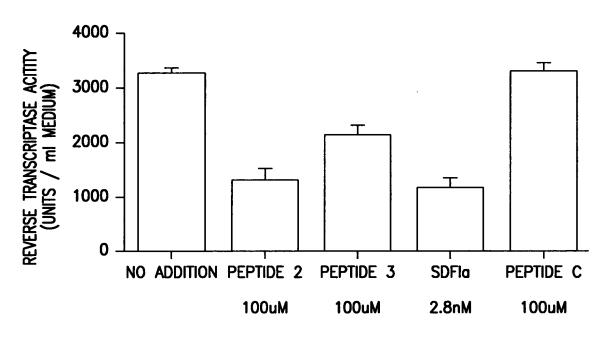


FIG. 3

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



FIG. 4

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



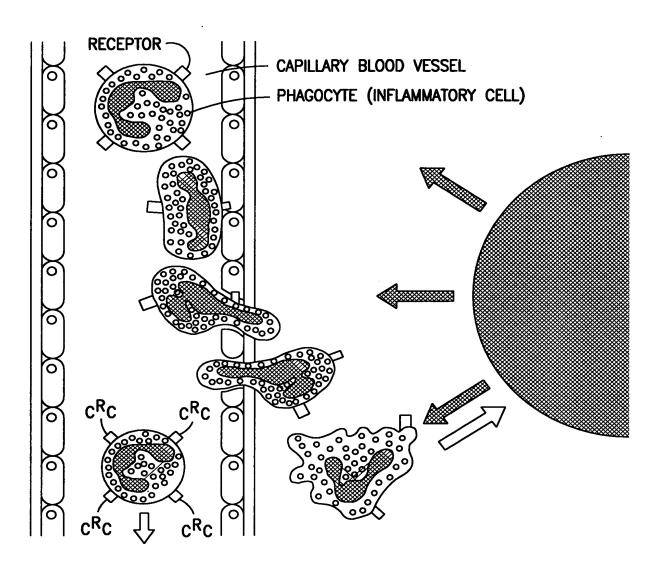


FIG. 5

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



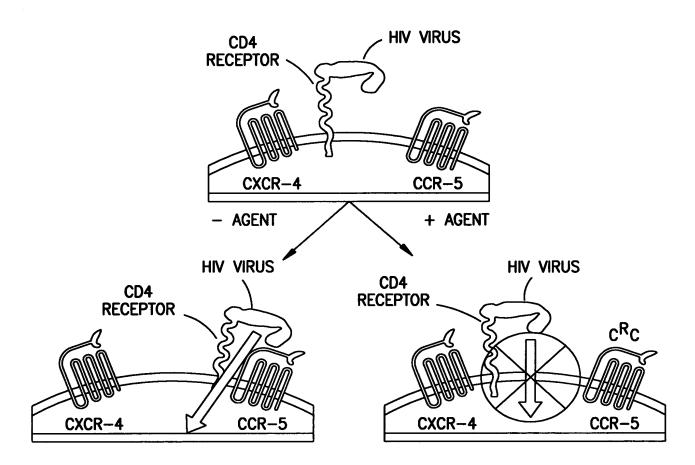


FIG. 6

TITLE: COMPOUNDS AND METHODS TO INHIBIT OR AUGMENT AN INFLAMMATORY RESPONSE INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

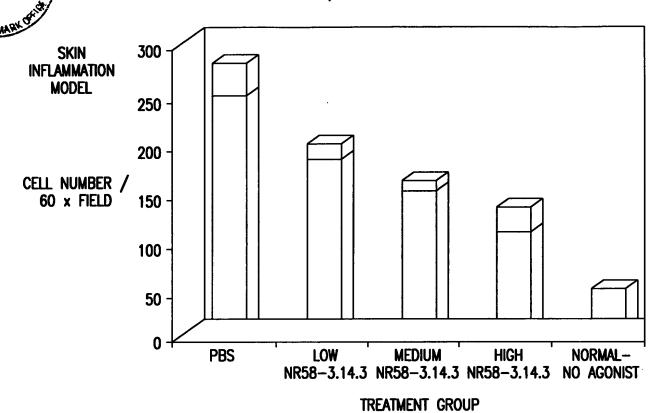
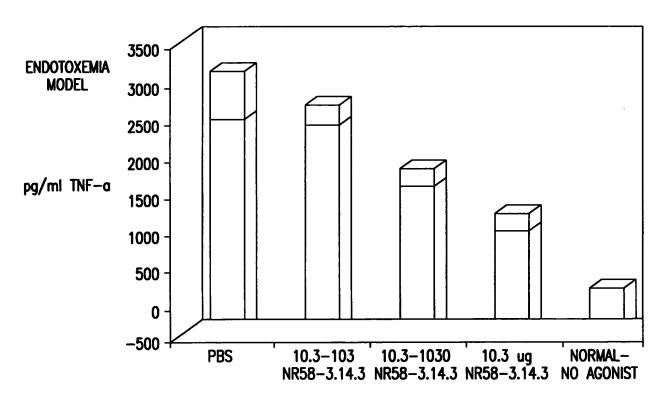


FIG. 7A



TREATMENT GROUP FIG. 7B

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



FIG. 8

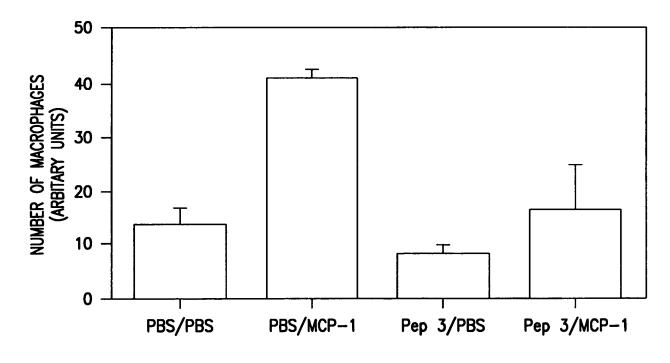
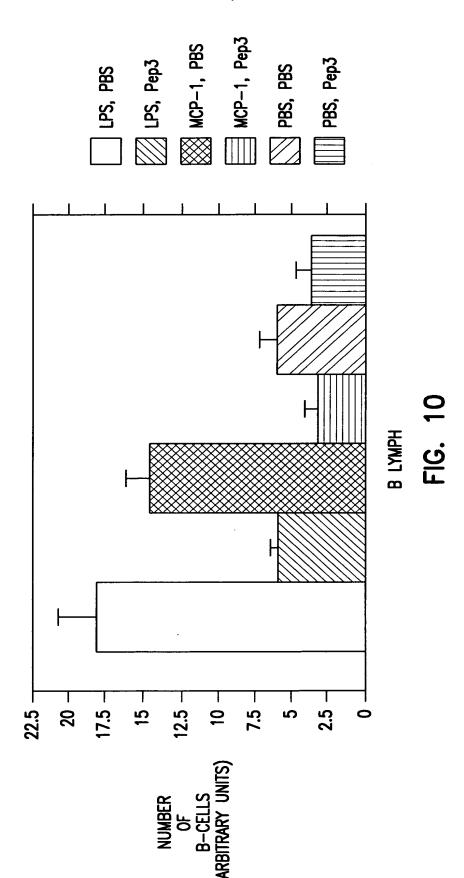


FIG. 9

INVENTOR'S NAME: David J. Grainger, et al.

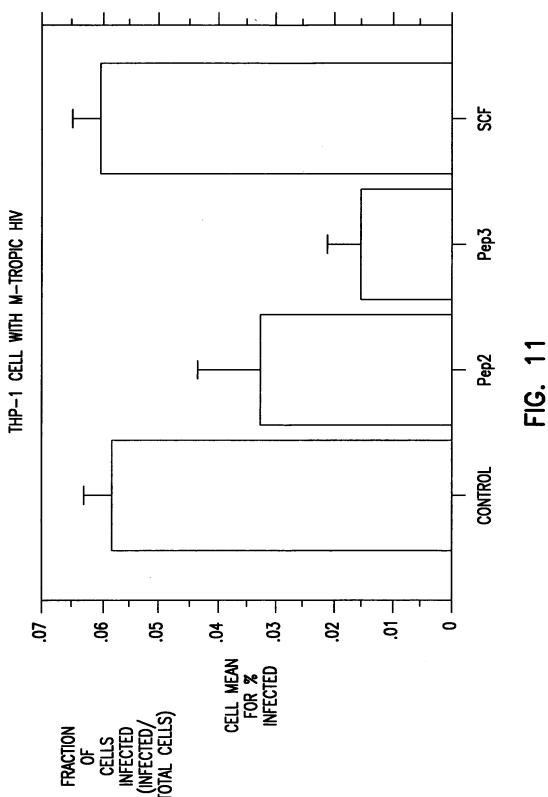
SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



INVENTOR'S NAME: David J. Grainger, et al. SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1









INVENTOR'S NAME: David J. Grainger, et al. SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

11/23

	••
Amino Acid	Codon
Phe	UUU, UUC
Ser	UCU, UCC, UCA, UCG, AGU, AGC
Tyr	UAU, UAC
Cys	UGU, UGC
Leu	UUA, UUG, CUU, CUC, CUA, CUG
Trp	UGG
Pro	CCU, CCC, CCA, CCG
His	CAU, CAC
Arg	CGU, CGC, CGA, CGG, AGA, AGG
Gln	CAA, CAG
Ile	AUU, AUC, AUA
Thr	ACU, ACC, ACA, ACG
Asn	AAU, AAC
Lys	AAA, AAG
Met	AUG
Val	GUU, GUC, GUA, GUG
Ala	GCU, GCC, GCA, GCG
Asp	GAU, GAC
Gly	GGU, GGC, GGA, GGG
Glu	GAA, GAG

FIG. 12

INVENTOR'S NAME: David J. Grainger, et al. SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

		
Original	Exemplary	Preferred
Residue	Substitutions	Substitutions
Ala (A)	val; leu; ile	val
Arg (R)	lys; gln; asn	lys
Asn (N)	gln; his; lys; arg	gln
Asp (D)	glu	glu
Cys (C)	ser	ser
Gln (Q)	asn	asn
Glu (E)	asp	asp
Gly (G)	pro	pro
His (H)	asn; gln; lys; arg	arg
Ile (I)	leu; val; met; ala; phe norleucine	leu
Leu (L)	norleucine; ile; val; met; ala; phe	ile
Lys (K)	arg; gln; asn	arg
Met (M)	leu; phe; ile	leu
Phe (F)	leu; val; ile; ala	leu
Pro (P)	gly	gly
Ser (S)	thr	thr
Thr (T)	ser	ser
Trp (W)	tyr	tyr
Tyr (Y)	trp; phe; thr; ser	phe
Val (V)	ile; leu; met; phe; ala; norleucine	leu

FIG. 13

REPLACEMENT SHEET

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

13/23

PEPTIDE-3

LFL peptide 3(1-12)[MCP-1]: Residues 50-61 of mature hMCP-1 E-I-C-A-D-P-K-Q-K-W-V-Q (SEQ. ID. NO.: 1)
L amino acids

LFL peptide 3(3-12)[MCPI] Residues 52-61 of mature hMCP-1 C-A-D-P-K-Q-K-W-V-Q (SEQ. ID. NO.: 7)
L amino acids

LFL peptide 3(1-6)[MCP1]: Residues 50-55 of mature hMCP-1 E-I-C-A-D-P (SEQ. 1D. NO.: 8)
L amino acids

LFL peptide 3(7-12)[MCP1]: Residues 56-61 of mature hMCP-1 K-Q-K-W-V-Q (SEQ. ID. NO.: 9)
L amino acids

LFL Leu₄peptide3(1-12)[MCP-1] E-I-C-L-D-P-K-Q-K-W-V-Q (SEQ. ID. NO.: 10) L amino acids

LFL Ser₇peptide3(1-12)[MCP-1] E-I-C-A-D-P-S-Q-K-W-V-Q (SEQ. ID. NO.: 11) L amino acids

LFL Ile₁₁peptide3(1-12)[MCP-1] E-I-C-A-D-P-K-Q-K-W-I-Q (SEQ. ID. NO.: 13) L amino acids

LFL Leu₄lle₁₁peptide3(1-12)[MCP-1] E-I-C-L-D-P-K-Q-K-W-I-Q (SEQ. ID. NO.: 14) L amino acids

CFL Cys₀Leu₄Ile₁₁Cys₁₃peptide3(1-12)[MCP-1] C-E-I-C-L-D-P-K-Q-K-W-I-Q-C (SEQ. ID. NO.: 106) L amino acids

LRD Leu₄Ile₁₁ peptide 3(1-12)[MCP-1] q-i-w-k-q-k-p-d-l-c-i-e D amino acids

FIG. 14A

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1 REPLACEMENT SHEET

14/23

CRD Cys₀Leu₄Ile₁₁Cys₁₃peptide 3(1-12)[MCP-1]

c-q-i-w-k-q-k-p-d-l-c-i-e-c

D amino acids

LFL Ser₇Glu₈Glu₉peptide3(1-12)[MCP1):Residues 50-61 of mature hMIP1α

E-I-C-A-D-P-S-E-E-W-V-Q (**SEQ. ID. NO.: 12**)

L amino acids

LFL peptide3(10-12)[MCP-1]

W-V-O

L amino acids

CFL Cys₀Cys₄ peptide3(10-12)[MCP-1]

C-W-V-O-C (SEQ. ID. NO.: 107)

L amino acids

LRD peptide3(10-12)[MCP-1]

q-v-w

D amino acids

LFL peptide3(7-9)[MCP-1]

K-Q-K

L amino acids

LRD peptide3(7-9)[MCP-1]

k-q-k

D amino acids

LFL peptide $3(7-9)[MIP1\alpha](MIP1\alpha$ specific inhibitor)

S-E-E

L amino acids

LRD peptide 3(7-9) [MIP1 α] (MIP1 α specific inhibitor)

e-e-s

D amino acids

LFL peptide3(7-9)[IL-8](IL-8 specific inhibitor)

K-E-N

L amino acids

LRD peptide3(7-9)[IL-8](IL-8 specific inhibitor)

n-e-k

D amino acids

FIG. 14B

AUS 1 5 2005 &

TITLE: COMPOUNDS AND METHODS TO INHIBIT OR AUGMENT AN INFLAMMATORY RESPONSE

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1 REPLACEMENT SHEET

15/23

LFL peptide3(7-9)[SDF- 1α](SDF- 1α specific inhibitor)

K-L-K

L amino acids

LRD peptide3(7-9)[SDF1 α] (SDF-1 α specific inhibitor)

k-l-k

D amino acids

LFL Leu₄Ile₁₁Cys₁₃ peptide3(3-12)[MCP-1] L-D-P-K-Q-K-W-I-Q-C **(SEQ. ID. NO.: 84)**

L amino acids

CRD Leu₄Ile₁₁Cys₁₃ peptide3(3-12)[MCP-1]

c-q-i-w-k-q-k-p-d-l-c

D amino acids

³H-Ala CRD-Leu₄Ile₁₁ Cys₁₃ peptide 3(3-12)[MCP-1](D-Ala attached to Asp residue of CRD-Leu₄Ile₁₁Cys₁₃ peptide 3(3-12)[MCP-1])

³H-L-Leu LRD Cys₁₃ peptide3(3-12)[MCP-1] c-q-i-w-k-q-k-p-d-L-c

D and L amino acids

LFL SES

S-E-S

L amino acids

LFL KKK

K-K-K

L amino acids

LFL Cys, peptide3(10-12)[MCP-1]

W-V-O-C (SEQ. ID. NO.: 85)

L amino acids

LRD Cys₄ peptide3(10-12)[MCP-1]

c-q-v-w

D amino acids

LFL Ile₁₁Cys₁₃peptide3(10-12)[MCP-1]

W-I-Q-C (**SEQ. ID. NO.: 86**)

L amino acids

FIG. 14C

AUE 1 5 2005 40 THE

TITLE: COMPOUNDS AND METHODS TO INHIBIT OR AUGMENT AN INFLAMMATORY RESPONSE

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1 REPLACEMENT SHEET

16/23

LRD Cys₁₃Ile₁₁peptide3(10-12)[MCP-1] cqiw

D amino acids

LRD peptide3(7-12)[MCP-1] q-v-w-k-q-k D amino acids

CFL Cys₀Cys₁₃peptide3(7-12)[MCP-1] C-K-Q-K-W-V-Q-C (SEQ. ID. NO.: 108) L amino acids

CRD Cys₀Cys₁₃peptide3(7-12)[MCP-1] c-q-v-w-k-q-k-c D amino acids

LFL peptide3(10-12)[RANTES] WVR L amino acids

LRD peptide3(10-12)[RANTES] rvw
D amino acids

LFL peptide3(10-12)[SDF-1] W-I-Q L amino acids

Peptide 2

LFL peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 S-Y-R-R-I-T-S-S-K-C-P-K-E-A-V (SEQ. ID. NO.: 105) L amino acids

CFL Cys₀Cys₁₆peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 C-S-Y-R-R-I-T-S-S-K-C-P-K-E-A-V-C (SEQ. ID. NO.: 109)
L amino acids

LRD peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 v-a-e-k-p-c-k-s-s-t-i-r-r-y-s D amino acids

FIG. 14D

TITLE: COMPOUNDS AND METHODS TO INHIBIT OR AUGMENT AN INFLAMMATORY RESPONSE INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

17/23

REPLACEMENT SHEET

CRD Cys₀Cys₁₆peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 c-v-a-e-k-p-c-k-s-s-t-i-r-r-y-s-c D amino acids

LFL peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1β H-L-K-I-L-N-T-P-N-C-A-L-Q-I-V (SEQ. ID. NO.: 103)
L amino acids

CFL Cys₀Cys₁₆peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1β C-H-L-K-I-L-N-T-P-N-C-A-L-Q-I-V-C (SEQ. ID. NO.: 110)
L amino acids

LRD peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1β v-i-q-l-a-c-n-p-t-n-l-i-k-l-h D amino acids

CRD Cys₀Cys₁₆peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1β c-v-i-q-l-a-c-n-p-t-n-l-i-k-l-h-c D amino acids

LFL peptide 2(1-14)[MIP-1α]: Residues 28-41 of hMIP-1α D-Y-F-E-T-S-S-Q-C-S-K-P-G-V (SEQ. ID. NO.: 5) L amino acids

LRD peptide 2(1-14)[MIP1α]: Residues 28-41 of mature hMIP1α v-g-p-k-s-c-q-s-s-t-e-f-y-d D amino acids

LFL peptide 2(1-16)[IL8]: Residues 27-42 of mature hIL8 E-L-R-V-I-E-S-G-P-H-C-A-N-T-E-I (SEQ. ID. NO.: 6)
L amino acids

LFL Peptide 2(1-10)[MCP-1]: Residues 28-37 of hMCP-1 S-Y-R-R-I-T-S-S-K-C (SEQ. ID. NO.: 87)
L amino acids

LFL peptide 2(10-15)[MCP-1]: Residues 37-42 of hMCP-1 C-P-K-E-A-V (SEQ. ID. NO.: 88)
L amino acids

LFL peptide 2(1-5)[MCP-1]: Residues 28-32 of hMCP-1 S-Y-R-R-I (SEQ. 1D. NO.: 89)
L amino acids

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1



REPLACEMENT SHEET



LFL peptide 2(6-10)[MCP-1]: Residues 33-37 of hMCP-1 T-S-S-K-C (SEQ. ID. NO.: 90)
L amino acids

LFL peptide $2(1-9)[MIP-1\alpha]$: Residues 28-36 of hMIP-1 α D-Y-F-E-T-S-Q-C (SEQ. ID. NO.: 91) L amino acids

LFL peptide 2(9-14)[MIP-1α]: Residues 36-41 of hMIP-1α C-S-K-P-G-V (SEQ. ID. NO.: 92)
L amino acid

LFL Cys₀Ser₁₀Cys₁₆peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 C-S-Y-R-R-I-T-S-S-K-S-P-K-E-A-V-C (SEQ. ID. NO.: 93)
L amino acids

CFL Cys₀Ser₁₀Cys₁₆peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 C-S-Y-R-R-I-T-S-S-K-S-P-K-E-A-V-C (SEQ. ID. NO.: 111)

L amino acids

LRD Cys₀Ser₁₀Cys₁₆peptide 2(1-15)[[MCP-1]: Residues 28-42 of hMCP-1 c-v-a-e-k-p-s-k-s-s-t-i-r-r-y-s-c D amino acids

CRD Cys₀Ser₁₀Cys₁₆peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1 c-v-a-e-k-p-s-k-s-s-t-i-r-r-y-s-c D amino acids

FIG. 14F

INVENTOR'S NAME: David J. Grainger, et al. SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1





		TH	P-1 MIGRAT	ION
SEQUENCE	DARC BINDING	MCP-1	MIP-1a	SDF-1a
SYRRITSSKCPKEAV	350nM	ns	ns	ns
VAEKPCKSSTIRRYS	18μΜ	ns	ns	ns
SYRRITSK	22μΜ	ns	ns	ns
SYRRI	>100µM	ns	ns	ns
TSSKC	>100µM	ns	ns	ns
CPKEAV	>100µM	ns	ns	ns
HLKILNTPNCALQIV	19µM	10μΜ	40μΜ	7μΜ
DYFETSSQCSKPGV	>100µM	ns	ns	ns
VGPKSCQSSTEFYD	>100µM	ns	ns	ns
DYFETSSQC	>100µM	ns	ns	ns
CSKPGV	>100µM	ns	ns	ns

FIG 15

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1





SEQUENCE	MOL WT.	DUFFY BINDING BD-50	MCP-1 ED-50	MIP-1α ED-50	RANTES ED-50	SDF-1a ED-50	IL-8 ED-50	OTHER
AQPDAINAPVTCC	1302	Мц06	ns	Su	ı	SU	Su	
SYRRITSSKCPKEAV	1725	100 µM	SU	SU	1	SU	1	
VAEKPCKSSTIRRYS	1725	18µМ	SU	Su	ı	Su	-	
HLKILNTPNCALQIV	1677.3	19µМ	10 μМ	40μM	1	Mμ7	ı	
DYFETSSQCSKPGV	1549	>100µM	ns	Su	I	SU	1	-
VQPKSCQSSTEFYD	1549	>100µM	ns	Su	1	รม	-	
SYRRITSSKC	1097.4	22 µM	SU	SU	1	SU	1	
CPKEAV	645.8	>100µM	ns	SU	ŀ	su	•	
SYRRI	633.9	>100µM	ทร	SU	-	Su	ì	
TSSKC	525.7	>100µM	us	SU	I	su	ı	
DYFETSSQC	1079.2	>100µM	ns	SU	-	SU	-	
CSKPGV	589.8	589.8 >100µМ	NS	Su	1	su	1	

FIG. 16A

INVENTOR'S NAME: David J. Grainger, et al. SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1





SICADPKQKNVQ	1445	Mu 6	8µМ	7.5 µМ	-	13.5µM	10µМ	
CADPKQKNVQ	1202	-	Мц8	6.5 µM	1	Мμ 9	8.5 µM	
CQVWKQKPDAC	1305	Mμξ	100nM	-	_	i	ı	
CQVWKQKPDAC	1305	Мц04	30nM	ı	ı	I	ı	
BICADP	647	_	25µM	20µM	ı	18.5µM	16µМ	
KQKWVQ	816	15 µM	7 µM	Mμ2	-	Mu, 2.5	5µМ	
BICLDPKQKWVQ	1487	_	₩п'8	M _H 7	ı	2.5 µM	3µM	
EICADPSQKWVQ	1404	M1,25	Mu 7	5.5 µM	ŀ	4 µM	3µМ	
EICADPKQKWIQ	1459	-	5.5 µM	3.5 µM	ı	Mµ 7	2 µM	
EICLDPKQKWIQ	1501	₩п'06	2µМ	2µМ	-	4 µM	3.5 µM	, <u>-</u>
WVQ	431.5	Mu 1	8µМ	7.5 µM	1.5 µM	2.25µM	Wri 1	
KQK	464.5	₩п05	7 µM	>100µM	>100µM	×100μΜ	>100µM	
SEE	399.4	>100µM	>100µM	1	>100µM	Mμ001<	>100µM	
KEN	425.4	>100μМ	>100µM	>100µM	>100μM	>100µM	-	

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

22/23



KLK	516.6	>100µM	>100µM	516.6 >100µМ >100µМ >100µМ >100µМ	>100µM	ŀ	>100µM	
CQIWKQKPDLC	1359	1359 >100µМ	Mu 1	ı	ı	350nM		NOTE 1
CQIWKQKPDLAC	1448	ı	100nM	-	_	-	I	NOTE 2
CQIWKQKPDLC	1472.2	1	Mu01	-	-	-	-	
SES	357.3	357.3 >100µМ >100µМ	>100µM	1	-	-	-	
KKK	8.609	609.8 >100μM	ı	ı	-	1	1	

NOTE1: IN VIVO EFFECT ABOLISHES MACROPHAGES IN AN IN VIVO RATE INTRADEMAL STUDY INDUCED BY 500 ng MCP-1, 300 g IV, AND 10mg SQ 30 MINUTES PRIOR TO MCP-1, D-ALA ("a") IS ATTACHED TO D-ASP ("d"). NORE 2: IN SAME STUDY AS NOTE 1 ABOVE, NO EFFECT ON MACROPHAGES SEEN

FIG. 16C

INVENTOR'S NAME: David J. Grainger, et al.

SERIAL NO.: 09/150,813 DOCKET NO.: 1543.002US1

23/23



	SAC	20-	20-	20-	20-
	DERMAL AGONIST DOSE (ng IN 50 ul) T=0	0 50 100 500	0 50 100 500	0 50 100 500	0 50 100 500
	DERMAL AGONIST	PBS LPS MCP-1 MCP-1	PBS LPS MCP-1 MCP-1	PBS LPS MCP-1 MCP-1	PBS LPS MCP-1 MCP-1
Study design table	RX Dose/Route T=30 Min	200 ul:LV 200 ul:SQ BACK	3 ug:LV 100 ug:SQ BACK LPS MCP-1 MCP-1	30 ug:LV 1 mg:SQ BACK	300 ug:LV 10 mg:SQ BACK
รณ	RX	PBS	NR58-3.14.3	NR58-3.14.3	NR58-3.14.3
	Z	3	3	3	3
	ANIMAL#	1,2,3	4,5,6	7,8,9	10,11,12
	GROUP	-	2	3	4

FIG. 17